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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/550,010	02/10/2006	Yoshiaki Hamada	8035-1024	5761
<small>465</small> YOUNG & THOMPSON 209 Madison Street Suite 500 ALEXANDRIA, VA 22314			<small>7590</small> EXAMINER PICKARD, ALISON K	
			<small>06/22/2009</small> ART UNIT 3676	PAPER NUMBER
			MAIL DATE 06/22/2009	DELIVERY MODE PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary

Application No.

10/550,010

Applicant(s)

HAMADA ET AL.

Examiner

Alison K. Pickard

Art Unit

3676

Period for Reply -- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 17 March 2009.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-3, 21, 22 and 28-41 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-3, 21, 22 and 28-41 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
- Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☒ Information Disclosure Statement(s) (PTO/SF-08)
- Paper No(s)/Mail Date _____
- 4) ☐ Interview Summary (PTO-413)
- Paper No(s)/Mail Date _____
- 5) ☐ Notice of Informal Patent Application
- 6) ☐ Other: _____

DETAILED ACTION

Claim Rejections - 35 USC § 103

1. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

2. Claims 1, 3, 21, 22, 28-30, and 34-41 are rejected under 35 U.S.C. 103(a) as being unpatentable over Great Britain Patent 931, 710 (GB '710) in view of Tanaka (6,554,286) in view of Sakai in view of Inamura (6,585,272).

GB '710 discloses a gasket comprising a metal base plate 10 with cylinder holes, coolant holes (e.g. near 13b), and annular beads 13. GB '710 discloses a metal layer (11, 12, or 16) on both surfaces of the base, especially around the beads. The layer comprises nickel-alloys, copper, or aluminum. The term "hard" is subjective and these coatings can be considered "hard" with respect to other materials, such as elastomers. Further, they are the same materials required by the claims. The material is a foil, which is considered a plating and can be applied with adhesive. GB '710 discloses that the gasket can be laminated using more than one plated base plate. However, GB '710 does not appear to disclose an outer peripheral bead totally surrounding the beads and coolant holes. Tanaka teaches a gasket having at least one base with cylinder holes, coolant holes, annular beads, and an outer peripheral bead 2c totally surrounding the beads 2b and holes 2a and 2d. The outer bead has a slope cross-section. The plate also has a plated layer. Tanaka teaches using the outer bead to prevent coolant from leaking as well as further aiding in sealing of the combustion holes. This effect is further enhanced when multiple plates are used.

Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to modify to use the outer bead taught by Tanaka to further seal the holes in the gasket. The distribution of the amount of step of the hard layer corresponds to the rigidity of the engine relevant to the bores.

GB '710 does not appear to disclose the hardness range for the plated layer. Sakai teaches a gasket with a base plate having a metal coating, such as copper or aluminum coatings. Sakai teaches that such coating should have a hardness of at about Hv 60 to function effectively. This value falls in either "hard" or "soft" range required by the claims. It would have been obvious to one of ordinary skill in the art at the time the invention was made to modify the layer of GB '710 by selecting the hardness values as taught by Sakai to enhance the sealing effect of the layer.

None appear to disclose forming the plated layer with a first, greater thickness at less rigid sections and a second thickness at more rigid portion of the engine. Inamura teaches a gasket with a coating/layer 4 having different thicknesses to adjust surface pressures. The coating is made thicker in portions so that the overall surface pressures are equal. It would have been obvious to one of ordinary skill in the art at the time the invention was made to modify the plating layer thicknesses to accommodate areas where a higher surface pressure is needed to make the overall pressure equal in the gasket.

Regarding claims 29, 35, and 39, GB '710 does not appear to disclose nickel-phosphorus. The selection of a known material based on its suitability for its intended use is considered obvious. See *In re Leshin*, 125 USPQ 416 (CCPA 1960). Therefore, it would have

been obvious to one of ordinary skill in the art at the time the invention was made to modify GB' 710 using nickel-phosphorus as the nickel alloy.

Regarding claims 21 and 22, requiring the layers to be electroplated or molten are process limitation in a product claim and given little patentable weight.

3. Claims 1-3, 21, 22, 28-41 are rejected under 35 U.S.C. 103(a) as being unpatentable over Kawaguchi (5,286,039) in view of GB '710 in view of Sakai in view of Inamura.

Kawaguchi discloses a laminate metal gasket comprising at least two base plates 10 and 20 and an auxiliary plate 40 or 30. The plates each have combustion holes and coolant holes. At least the base plates 10 and 20 have annular beads 21 and 31 and as seen in Figure 1, a peripheral bead surrounds all openings. The auxiliary plate has a bead (e.g. 31) atop and facing bead 21. Kawaguchi does not appear to disclose metal layers on the plates. GB '710 teaches coating layers of a laminate metal gasket with metal layers to improve the sealing function. The coating covers the plates, especially at the bead sections. The coating can comprise copper, nickel alloys, or aluminum and can be considered "hard" or "soft" as these are relative terms. And, the materials are the same as that required by the claims. Coating all the layers in Kawaguchi would meet the limitations required by the claims. Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to modify to coat the plates in Kawaguchi with the metal layer taught by GB '710 to improve the sealing effect of the gasket, especially at the beaded areas. The distribution of the amount of step of the hard layer corresponds to the rigidity of the engine relevant to the bores.

GB '710 does not appear to disclose the hardness range for the plated layer. Sakai teaches a gasket with a base plate having a metal coating, such as copper or aluminum coatings.

Sakai teaches that such coating should have a hardness of at about Hv 60 to function effectively. This value falls in either “hard” or “soft” range required by the claims. It would have been obvious to one of ordinary skill in the art at the time the invention was made to modify the layer of GB ‘710 by selecting the hardness values as taught by Sakai to enhance the sealing effect of the layer.

None appear to disclose forming the plated layer with a first, greater thickness at less rigid sections and a second thickness at more rigid portion of the engine. Inamura teaches a gasket with a coating/layer 4 having different thicknesses to adjust surface pressures. The coating is made thicker in portions so that the overall surface pressures are equal. It would have been obvious to one of ordinary skill in the art at the time the invention was made to modify the plating layer thicknesses to accommodate areas where a higher surface pressure is needed to make the overall pressure equal in the gasket.

Regarding claims 29, 32, 35, and 39, GB ‘710 does not appear to disclose nickel-phosphorus. The selection of a known material based on its suitability for its intended use is considered obvious. See *In re Leshin*, 125 USPQ 416 (CCPA 1960). Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to modify GB’ 710 using nickel-phosphorus as the nickel alloy.

Regarding claims 21 and 22, requiring the layers to be electroplated or molten are process limitations in a product claim and given little patentable weight.

Response to Arguments

4. Applicant's arguments filed 3-17-09 have been fully considered but they are not persuasive.

Inamura teaches using a thicker layer at locations where there is less rigidity and needing a higher sealing surface pressure. The different thicknesses help provide a uniform sealing pressure throughout the gasket. Okazaki '782 also discusses varying coating thicknesses as needed.

Conclusion

5. Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Alison K. Pickard whose telephone number is 571-272-7062. The examiner can normally be reached on M-F (9-5).

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Jennifer Gay can be reached on 571-272-7029. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

/Alison K. Pickard/
Primary Examiner, Art Unit 3676

AP